



Vermont Department of Environmental Conservation

Agency of Natural Resources

Watershed Management Division

Barre Regional Office

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AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES

Pursuant to Section C.2.2 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: SA-03- 116 -2015

Applicant Name: TOWN OF MORGAN

Mailing Address: 41 MEAD HILL RD 05853 Phone: 895-2927

Project Location BEAR MOUNTAIN RD Email: tmorganvt@comcast.net

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes the replacement of an undersized culvert with a new reinforced 14'x7' box, buried 2' with 2' of infill 11'E2'.
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit.
3. The proposed activity will meet the terms and conditions of the General Permit provided:
 - a) The project will be completed and approved as shown on the plan dated 3-20-15, prepared by VTRANS DISTRICT 9, and approved by the Vermont Agency of Natural Resources.
 - b) The project will not adversely affect the public safety by increasing flood hazards.
 - c) The project will not significantly damage fish life or wildlife.
 - d) The project will not significantly damage the rights of riparian owners.
 - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
 - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
 - g) The ANR River Management Engineer is notified by phone or email when construction begins and when the project is complete.
 - h) A final construction inspection is required for all culvert and bridge projects.
 - i) In-stream working dates are from June 1st through October 1st; any in-stream work outside these dates will require an Individual Stream Alteration Permit authorization by the River Management Engineer.
 - j) This authorization has been posted for three days public comment. This authorization constitutes final approval.
 - k) Additional Conditions for this project: 1. Water by-pass plan required.

If there are any changes in the project plan or deviation in construction from the plan, the Permittee must notify the River Management Engineer immediately.

If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

David K. Mears, Commissioner
Department of Environmental Conservation

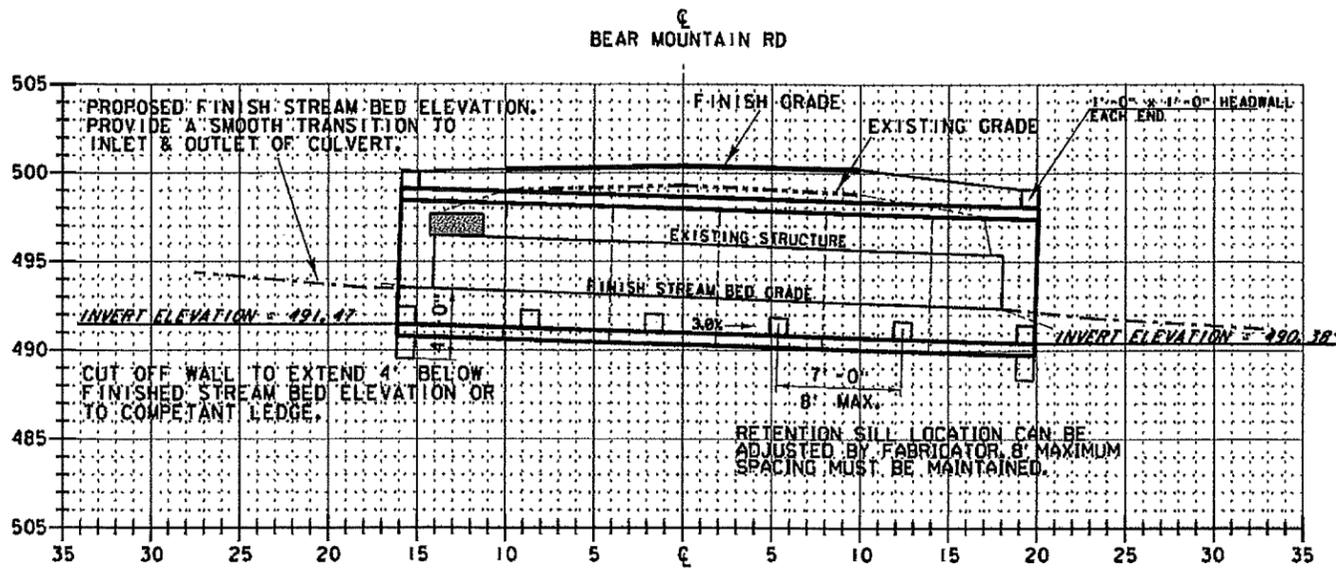
by: Patrick Ross
Patrick Ross, P.E., River Management Engineer

dated: 4-22-15

EXISTING STRUCTURE: 57' x 38' x 32' CORRUGATED METAL PIPE ARCH
 PROPOSED STRUCTURE: 14'W x 7'H x 36'L PRECAST BOX CULVERT
 WITH 1'H BED RETENTION SILLS. STRUCTURE TO BE BURIED
 2' BELOW FINAL STREAM BED ELEVATION.

GENERAL NOTES

1. INFORMATION FOR THIS PLAN WAS DEVELOPED FROM A ROD LEVEL SURVEY BASED ON A BENCHMARK ELEVATION OF 500.00'. NO TOPOGRAPHIC SURVEY WAS CONDUCTED AT THIS SITE.
2. THIS PROJECT SHOULD BE CONDUCTED IN A MANNER WHICH MINIMIZES OR AVOIDS ANY DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS TO SURFACE WATERS.
3. A PRE- CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR, VTRANS DISTRICT STAFF AND THE ANR RIVER MANAGEMENT ENGINEER
4. THE RIVER MANAGEMENT ENGINEER SHALL BE NOTIFIED WHEN CONSTRUCTION BEGINS AND WHEN THE PROJECT IS COMPLETE.
5. IN STREAM WORKING DATES FOR ALL GENERAL PERMIT ACTIVITIES SHALL BE DONE BETWEEN JULY 1ST AND OCTOBER 1ST. ANY INSTREAM WORK OUTSIDE OF THESE DATES WILL REQUIRE AN INDIVIDUAL STREAM ALTERATIONS PERMIT AUTHORIZED BY THE RIVER MANAGEMENT ENGINEER (PATRICK ROSS).
6. CONTRACTOR SHALL SUBMIT PRECAST BOX SHOP DRAWINGS TO THE TOWN AND DISTRICT STAFF FOR REVIEW AND APPROVAL.



CONSTRUCTION NOTES

THE PROPOSED STRUCTURE IS A 14' x 7' x 36' PRECAST CONCRETE BOX CULVERT BURIED 2' BELOW FINISHED STREAM BED ELEVATION WITH 1' HIGH BED RETENTION SILLS SPACED AT 8' O.C. MAX. ACTUAL WATERWAY OPENING IS 14' x 5' = 70 SQFT.

STRUCTURE SHALL HAVE FLARED WINGWALLS AT THE INLET AND OUTLET TO SMOOTHLY TRANSITION FLOW THROUGH CULVERT. THE WINGWALLS SHALL MATCH INTO THE EXISTING STREAM BANK. WINGWALLS MAY BE CAST IN PLACE OR PRECAST WITH LENGTHS DETERMINED IN THE FIELD. FOOTING SIZE TO BE DETERMINED BY FABRICATOR.

STRUCTURE TO HAVE CUT OFF WALLS AT THE INLET AND OUTLET, AND MUST EXTEND A MINIMUM OF 4' BELOW STREAM BED ELEVATION.

STONE FILL TYPE II SHALL BE USED TO STABILIZE ANY DISTURBED STREAM BANKS AT THE INLET AND OUTLET OF THE STRUCTURE. STONE FILL SHALL EXTEND A MINIMUM OF 1' ABOVE THE INLET.

ALL BACK FILL SHALL BE WELL GRADED MATERIAL FREE OF ORGANIC AND PLACED AT 6"-8" LIFTS COMPACTED TO 95% MAXIMUM DRY DENSITY.

STRUCTURE SHALL HAVE A MINIMUM OF 2' OF COVER IN THE SHALLOWEST LOCATION. (TO BE VERIFIED BY FABRICATOR.)

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.

THE BOX CULVERT INCLUDING THE SILLS SHALL BE PRECAST. THE WING/ WING/HEADWALLS MAY BE EITHER PRECAST OR CAST IN PLACE. THE DESIGN OF THE STRUCTURE SHALL BE THE RESPONSIBILITY OF THE FABRICATOR. THE STRUCTURE SHALL BE DESIGNED TO APPLICABLE STANDARDS.

THE CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS FOR THE PROPOSED STRUCTURE AND ALL ASSOCIATED DETAILS FOR THE APPROVAL OF THE VTRANS DISTRICT ENGINEER IN ACCORDANCE WITH SUBSECTION 105.03 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE BOX CULVERT TYPICAL SECTIONS SHOWN IN THE DRAWINGS ARE FOR SCHEMATIC PURPOSES ONLY. THE ACTUAL DIMENSIONS OF THE STRUCTURE AND ITS COMPONENTS WILL BE DEPENDENT ON THE FABRICATOR.

ALL BOX CULVERT JOINTS SHALL BE STRENGTHENED WITH PERMANENT CLOSURE HARDWARE. ALL HARDWARE COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH SUBSECTION 506.15 OF THE STANDARD SPECIFICATIONS.

AFTER BOX CULVERT SECTIONS HAVE BEEN SET IN THEIR FINAL POSITION, THE EXTERIOR (TOP AND SIDES) AND INTERIOR (SIDES AND BOTTOM) OF ALL BOX CULVERT JOINTS, AND ALL LIFTING HOLES, SHALL BE FILLED WITH MORTAR, TYPE IV. ALL MORTAR SHALL BE WET CURED A MINIMUM OF 12 HOURS OR UNTIL THE COMPRESSIVE STRENGTH HAS REACHED 2000 PSI. PRIOR TO THE APPLICATION OF ANY WATERPROOFING, APPROVED CURING COMPOUNDS MAY BE USED ON INTERIOR SURFACES IN LIEU OF WET CURING. ANY SIMILAR APPROVED WATER PROOFING OF JOINTS MAY BE USED IF APPROVED BY FABRICATOR.

STREAMBED STONE FILL SPECIFICATIONS:
 TYPE E2 STONE FILL SHALL BE INSTALL AS PER CROSS SECTION. THE LONGEST DIMENSION OF THE STONE SHALL BE AT LEAST 24" AND AT LEAST 50 PERCENT OF THE VOLUME OF THE STONE IN PLACE SHALL HAVE A LEAST DIMENSION OF 18". AND AT LEAST 25 PERCENT OF THE PARTICLES SHALL HAVE A MAXIMUM DIMENSION OF 2" AND BE WELL GRADED MATERIAL.

THE STREAM BED FILL SHALL BE HARD, BLASTED, ANGULAR ROCK OTHER SERPENTINE ROCK CONTAINING THE FIBROUS VARIETY CHRYSOTILE (ASBESTOS). SIMILAR SIZED RIVER SEDIMENT IS AN ACCEPTABLE ALTERNATIVE AS IS A MIXTURE OF ANGULAR MATERIAL AND RIVER SEDIMENT.

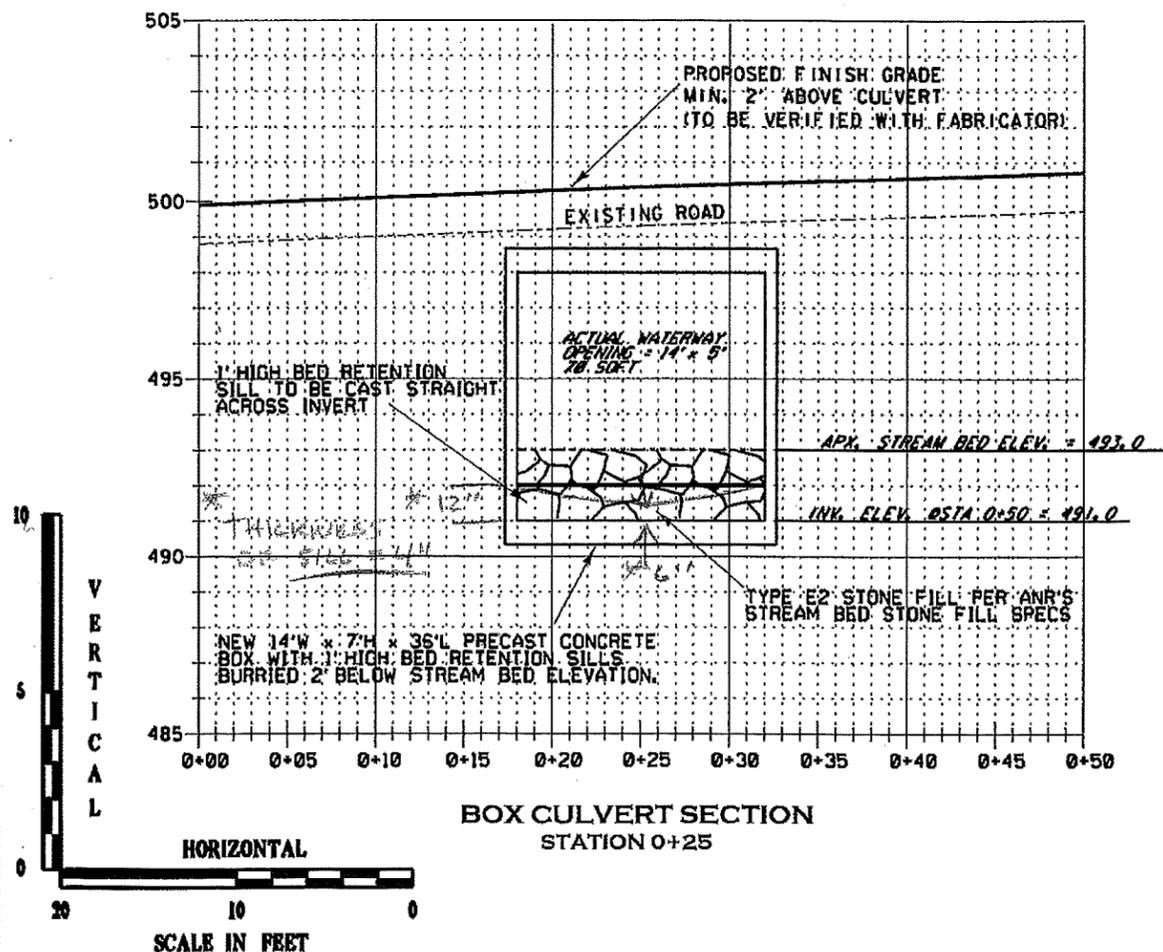
STONE PLACED INSIDE OF A CLOSED STRUCTURE SHALL BE PLACED SUCH THAT THE STRUCTURE IS NOT DAMAGED.

CARE SHALL BE TAKEN TO LIMIT SEGREGATION OF THE MATERIALS

ADD SAND BARROW ITEM AS NEEDED TO SEAL THE BED AND PREVENT SUBSURFACE FLOW.

TRAFFIC CONTROL:
 THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ONE LANE CLOSURE PER THE LATEST VERSION OF THE MUTCD.

UTILITY:
 THE CONTRACTOR IS ADVISED TO EXERCISE CAUTION WHILE WORKING IN AREAS OF UTILITIES. CONTRACTOR SHALL PLAN THE WORK ACCORDINGLY. ALL DIG SAFE REQUIREMENTS ARE APPLICABLE.



PLANS PREPARED BY:	PROJECT:	PROJECT MANAGER: S. MORIN
 DISTRICT #9	2015 TOWN HIGHWAY GRANT PROGRAM	DESIGNED BY: J. SEVIGNY
	REPLACEMENT OF AN EXISTING 57" x 38" x 32' CMP ARCH WITH A PROPOSED 14' x 7' x 36' PRECAST CULVERT BURIED 2' BELOW FINAL STREAM BED ELEVATION.	CHECKED BY: S. MORIN
		PLOT DATE: 3/20/15
		SHEET 1 OF 1